TREATMENT OF CARBUNCLE WITH SHORT WAVE DIATHERMY AND CAUTERY PUNCTURE*

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THE fact that striking symptomatic relief occurred, the clinical course shortened and apparent systemic complication avoided has prompted this report on the use of short wave diathermy and cautery puncture in the treatment of 3 cases of carbuncle of the neck. In 2 of the cases, despite the actual inflammatory lesion, pain was the chief complaint and the reason for admission and its relief within thirty minutes after the application of the high frequency therapy without the use of sedatives is worth remarking.

Although some investigators have claimed certain specific biologic or bactericidal actions for short wave, its thermal properties only were the basis for use in these cases. The frequently mentioned contraindication in acute non-draining infection was also kept in mind and to meet this condition the use of cautery puncture to convert the non-draining into an externally draining cavity was adopted. In addition, the cautery was selected so that all vascular supply would be sealed off and the possibility of open blood spaces that might occur with incisions was eliminated.

It is known that high frequency currents avoid mechanical and chemical effects but have the ability to heat body tissues through which they pass. Physiologically this results in the opening of large numbers of capillaries and the increase in the rate of the blood flow through the capillaries. The acceleration of tissue metabolism is procured and there is an augumentation of the rate of exchange between blood and tissue.

The 3 cases presented lesions of the type that could have been treated in one of the three following ways; (1) excision by either scapel or electrosurgery under general anesthesia; (2) cautery puncture under general anesthesia followed by hypertonic wet dressings or the application of heat; (3) the use of bacteriophage, particularly if a bacterial strain of Staphylococcus aureus or albus is present. All the carbuncles had the usual brawny consistency studded throughout with numerous pinpoint spots exuding pus, but with no definite fluctuant areas.

The technic of the treatment is as follows. A cable is attached to the short wave machine and is given three turns at the center so as to form a circle, large enough to extend beyond the margins of the lesion. Several thicknesses of toweling are placed over this and the patient is instructed to lie down in such a manner that the carbuncle occupies the center of it. The current is turned to the point of comfortable heat tolerance and the treatment is kept up for fifteen or twenty minutes either once or twice in twenty-four hours.

The carbuncle is carefully inspected each day and as soon as any point of fluctuation is seen this is drained by puncturing with the actual cautery. No anesthesia is required as the tissues at this spot are usually so insensitive or desensitized that the patient scarcely perceives the cautery thrust. The fact that anesthesia is not necessary is important because carbuncles usually occur in old persons, frequently debilitated, and often diabetic in whom the use of an anesthetic presents a definite hazard.

The clinical courses of the cases forming the basis for this report are as follows:

* From the Jersey City Medical Center.

Case I. J. T., aged fifty-six years. One week before admission he noticed a pimple on the back of his neck which he scratched and within twenty-four hours a physician considered it advisable to incise. Notwithstanding this treatment the condition became worse so that upon admission to the hospital he presented a hard, indurated area on the back of his neck about 4 inches in diameter. There was bluish discoloration about the margins and a yellow area in the center, still firm but showing numerous small pus-draining points. The pain was very severe. A twenty-minute short wave diathermy treatment was given and in a half-hour he was very comfortable. The next day the center was fluctuant and this was drained by several cautery punctures without anesthesia. The diathermy was continued daily and as additional areas of fluctuation appeared they were punctured. The patient was discharged in thirteen days with the infection entirely cleared and only a faint pink blush to mark its site.

Case II. J. F., aged sixty-three years, complained of a painful infected swelling on the back of the neck for one week continuously increasing in size. There were a few superficial yellow areas which were points of pus ready to discharge spontaneously. The entire part was hard and indurated and measured about 3 inches in diameter. One of the small pus pockets was punctured and the culture showed Staphylococcus aureus. A short wave diathermy treatment was given at once and repeated the next day. In thirty-six hours the center area was ready for cautery puncture. This was repeated when indicated and the patient was discharged in twelve days with the infection cleared. The relief of pain soon after the first treatment was mentioned by this patient.

Case III. I. N., sixty years of age, complained of an abscess on the right side of the neck about 4 cm. in diameter for the week previous to admission. He gave a history of diabetes for eight years with irregular periods of proper supervision. When admitted he showed a moderate amount of glycosuria which at the start required ten units of insulin three times daily, gradually diminishing. Thirty-six hours after the short wave diathermy, this lesion ruptured spontaneously and did not require cautery puncture. He was discharged in one week. There was slight redness and induration but no fluctuation or pus exudate and the reason he left the hospital was because he said that he didn't feel "sick enough to stay any longer."

SUMMARY

In the discussion of these cases the ease of application of short wave diathermy as compared with the previous conventional lower frequency diathermy is noteworthy. In addition, another advantage is the comparative comfort with which persons of this age may be treated. This plan of therapy is, therefore, considered a valuable adjunct to management of cases of this type.

PRINTED IN U. S. A.